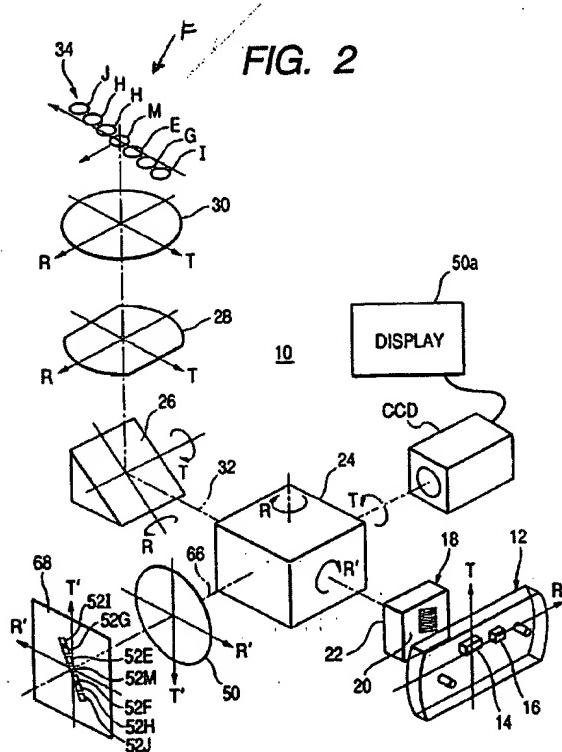


As stated in MPEP §§ 2142-2143.01, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. "The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art." In re Kotzab, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). See also In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

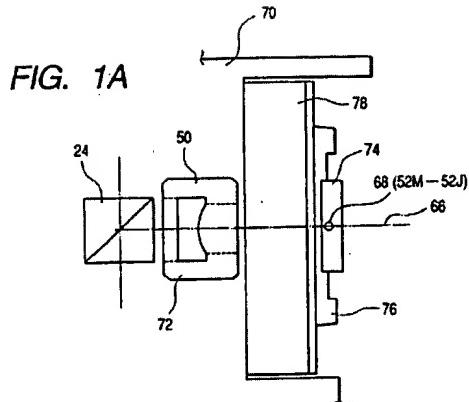
Claims 1, 16, 18 and 30 are generally directed to an optical pickup apparatus (see FIGS. 1-21) which serves to focus the spots (M, E, F, G, H, I and J) lining up in a single file of a plurality N of light beams onto a plurality N of adjacent tracks of a recording medium (34 or 128) and detect a plurality N of reflected lights from the tracks, whereby simultaneously reading out a plurality N of pieces of data recorded on the tracks, where N is an integer more than two.

In claims 1 and 16, the apparatus (see FIG. 2) comprises:

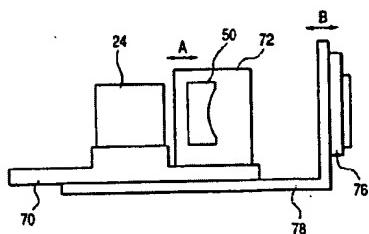


(a) objective spot forming means (30) for forming each spot (M, E, F, G, H, I, and J) of the plurality of light beams entered via a collimator (28), on each track of the recording medium (34);

(b) a plurality N of adjacent photodetectors (52M, 52E, 52F, 52G, 52H, 52I, and 52J) lining up in a single file, each provided for each spot (M to J) for receiving reflected light of each spot (M to J), the reflected light having passed through the objective spot forming means (30), the collimator (28), and focus adjusting means (50) in this order; and



*FIG. 1B*

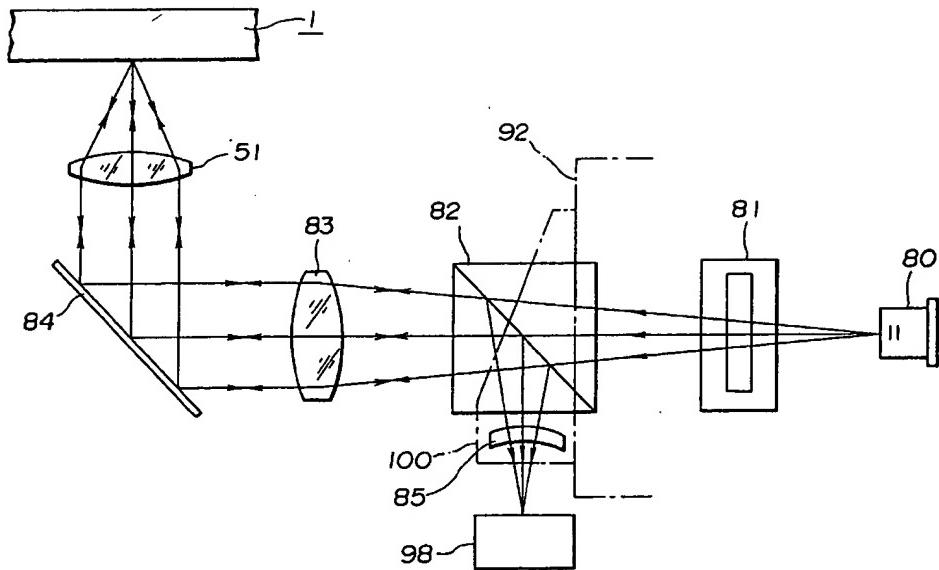


(c) a chassis (70) mounted with the collimator (28) (see FIGS. 1A and 1B),

where the focus adjusting means (50) and the series of adjacent photodetectors (52M to 52J) are supported respectively by a focus adjusting means support member (72) and a photodetector support member (78) formed separately from the chassis (70) (or a means (72, 78) for adjusting a distance between said focus adjusting means and said photodetectors), and the focus adjusting means support member (72) and the photodetector support member (78) are movable along a direction of an optical axis (66), and these members (72, 78) are fixed to the chassis either:

(claim 1) at positions along an optical axis, the positions being visually confirmed that the reflected light of each spot (M to J) becomes incident upon a corresponding one of the photodetectors (52M to 52J) or

(claim 16) the distance is adjusted by moving the first member along the second member.



**FIG.14**

The Official Action relies upon object lens 51 of Fujisawa (see FIG. 14) to allegedly teach the objective spot forming means 30 of the present invention, collimator 83 for the collimator 28, optical disc 1 for the recording medium 34, photodetectors 98, 99 for the plurality N of adjacent photodetectors 52M-J, and multi-lens 85 for the focus adjusting means 50 (page 3, Paper No. 20050530). Although not stated explicitly in the Official Action, it is presumed that the Official Action is relying on multi-lens 85 to correspond with the focus adjusting means 50 of the present invention. If the Examiner is relying upon a different feature of Fujisawa, or on Crane or Noda to teach the focus adjusting means 50 of the present invention, the Applicants respectfully request clarification.

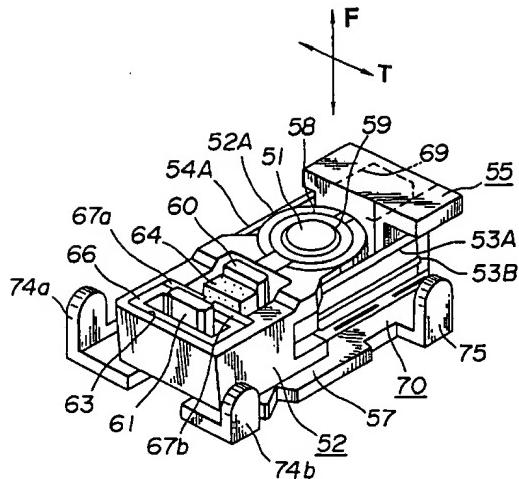


FIG.9

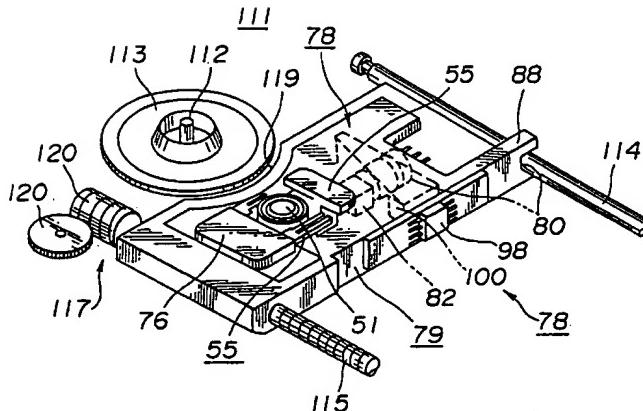


FIG.10

Also, the Official Action relies upon yoke 57 of Fujisawa (see FIGS. 9 and 10) to allegedly teach the chassis 70 of the present invention, coil attachment portion 63 for the focus adjusting means support member or first member 72, and base member 79 and multi-lens holder 100 for the photodetector support member or second member 78, and on the teachings of column 19, lines 20-29 and 52-55 and column 21, lines 37-42 for movement along a direction of an optical axis 66 (page 3, Paper No. 20050530).

The Official Action relies on Crane to allegedly teach “plural adjacent photodetectors and a device for visual confirmation (CCD)” (Id.) and on Noda to allegedly teach a “plurality of adjacent photodetectors lining up in a single file” (page 4, Id.). The Official Action asserts that it would have been obvious to combine Fujisawa, Crane and Noda, and that the combined device teaches or suggests all the features of the claims of the present invention. The Applicants respectfully disagree.

Fujisawa, Crane and Noda, either alone or in combination do not teach or suggest that focus adjusting means and a series of adjacent photodetectors are supported respectively by a focus adjusting means support member and a photodetector support member formed separately from the chassis (or a means for adjusting a distance between said focus adjusting means and said photodetectors), and the focus adjusting means support member and the photodetector support member are

movable along a direction of an optical axis, and these members are fixed to the chassis either (a) at positions along an optical axis, the positions being visually confirmed that the reflected light of each spot becomes incident upon a corresponding one of the photodetectors or (b) the distance is adjusted by moving the first member along the second member.

In summary, the Official Action asserts the following relationships between Fujisawa and claims 1 and 16:

Fujisawa	Claims 1 and 16
object lens 51	objective spot forming means 30
collimator 83	collimator 28
optical disc 1	recording medium 34
photodetectors 98, 99	plurality N of adjacent photodetectors 52M-J
multi-lens 85	focus adjusting means 50
yoke 57	chassis 70
coil attachment portion 63	focus adjusting means support member or first member 72
base member 79 and multi-lens holder 100	photodetector support member or second member 78
column 19, lines 20-29 and 52-55 and column 21, lines 37-42	movement along a direction of an optical axis 66

Specifically, Fujisawa does not teach or suggest that focus adjusting means (multi-lens 85) is supported by a focus adjusting means support member (coil attachment portion 63), because multi-lens 85 appears to be supported by multi-lens holder 100, which is in sliding contact with base member 79 (see column 19, lines 20-29). The coil attachment portion 63 (shown in FIG. 9) appears to be associated with object lens 51, and the coil attachment portion 63 does not support multi-lens 85.

With respect to claim 16 only, Fujisawa does not teach or suggest that coil attachment portion 63, base member 79 and multi-lens holder 100 are for adjusting a distance between said focus adjusting means (multi-lens 85) and said photodetectors (98, 99), because Fujisawa only discusses adjustment of the spacing between multi-lens 85 and photodetector 98 (column 19, lines 53+).

Fujisawa does not teach or suggest that the focus adjusting means support member (63) and the photodetector support member (79, 100) are movable along a direction of an optical axis. It appears that Fujisawa is concerned with "the optical axis extending over beam splitter 82, multi-lens 85 and photo detector 98" (column 21, line 35), where the adjustment jig 125 is rotated resulting in movement of the multi-lens holder 100 in the direction of the arrow shown in FIG. 12 (column 19, lines 57-67). Although it appears that multi-lens holder 100 is adjusted in the direction of arrow F as shown in FIG. 12 (column 19, lines 53+), it does not appear that coil adjustment member 63 or base member 79 are movable along with multi-lens holder 100 along the direction of arrow F.

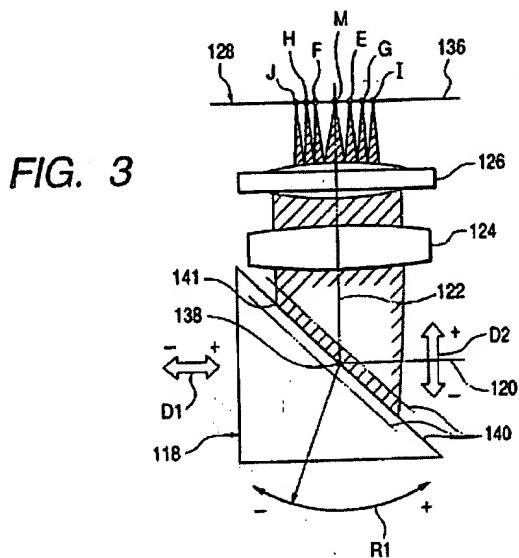
Fujisawa does not teach or suggest that members (63, 79, 100) are fixed to the chassis (57) either (a) at positions along an optical axis (the arrow in FIG. 12), the positions being visually confirmed that the reflected light of each spot becomes incident upon a corresponding one of the photodetectors (98, 99) or (b) the distance is adjusted by moving the first member (63) along the second member (79, 100). Fujisawa does not teach or suggest visual confirmation for both photodetectors 98, 99 based on positions along the arrow in FIG. 12. Photodetector 98 of Fujisawa is for "detecting information signals recorded on optical disc 1, focusing error signals and tracking error signals" (column 15, lines 6-7). However, photodetector 99 is "for controlling output of semiconductor laser 80" (column 15, lines 25-26). Also, as noted above, members 63 and 79 do not appear to move. Rather, only multi-lens holder 100 is moved.

Crane and Noda do not cure the deficiencies in Fujisawa. As noted above, the Official Action relies on Crane to allegedly teach "plural adjacent photodetectors and a device for visual confirmation (CCD)" (Id.) and on Noda to allegedly teach a "plurality of adjacent photodetectors lining up in a single file" (page 4, Id.). However, Fujisawa, Crane and Noda would not teach or suggest modifying multi-lens 85 so that it is supported by coil attachment portion 63; adjusting the spacing between multi-lens 85 and photodetector 99 (in addition to photodetector 98); making coil adjustment member

63 or base member 79 movable along with multi-lens holder 100; visual confirmation for both photodetectors 98, 99 based on positions along the arrow in FIG. 12; and adjusting the distance between 85 and 98 and 99 by moving 63 along 79 and 100.

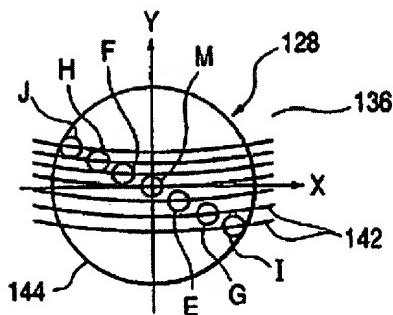
Since Fujisawa, Crane and Noda do not teach or suggest all the claim limitations, a *prima facie* case of obviousness cannot be maintained.

In claims 18 and 30, the apparatus (see FIGS. 3-21) comprises:



(a) a light reflection optical element (118, see FIG. 3; or 1120, 1122, 1124, 1126, see FIGS. 18-21) for reflecting the plurality of light beams incoming along a direction of a first axial line (120), toward a direction of a second axial line (122) different from the first axial line, the light reflection optical element being attached rotatably around each of the first and second axial lines (120, 122);

FIG. 7



(b) spot forming means (126) for forming a plurality of spatially separated spots (M, E, F, G, H, I, and J) of each light beam incoming along the direction of the second axial line (122) from the light reflection optical element (118, 1120, 1122, 1124, 1126), on each track (142, see FIG. 7) of the recording medium (128);

FIG. 13

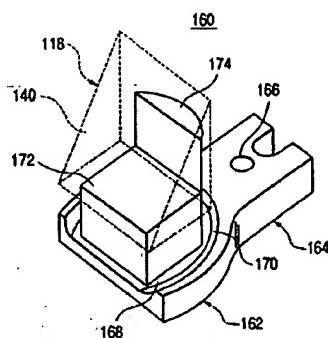


FIG. 14A

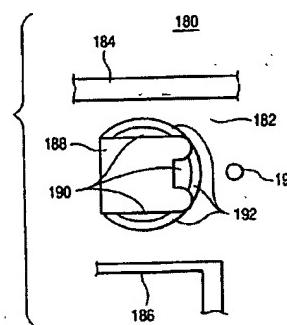
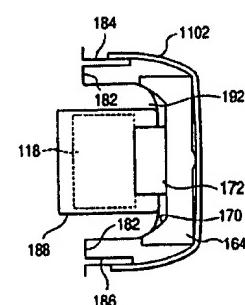


FIG. 14B



(c) support means (170, 182, see FIGS. 13-14) for rotatably (or movably) supporting the light reflection optical element (118, 1120, 1122, 1124, 1126) about at least one rotation axial line on a chassis (180), the rotation axial line passing a reference point (138) which is a cross point between the first and second axial lines (120, 122) or on a chassis along

the direction of the first axial line (120) and/or the direction of the second axial line (122);

FIG. 15

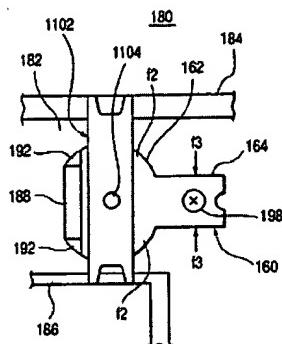
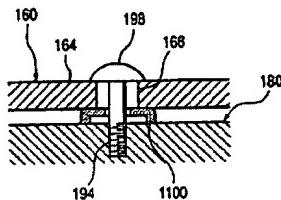


FIG. 16



(d) fixing means (198, 1102, see FIGS. 15-16) for fixing the light reflection optical element (118, 1120, 1122, 1124, 1126) to the chassis (180), whose rotational position has (or whose positions to the directions of the first and second axial lines (120, 122) have) been adjusted so that the focus states of the plurality of spots (M, E, F, G, H, I, and J) are substantially equal; and

FIG. 9

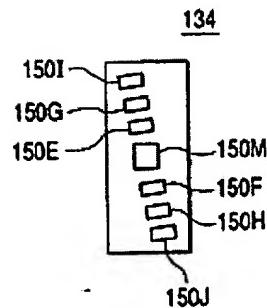
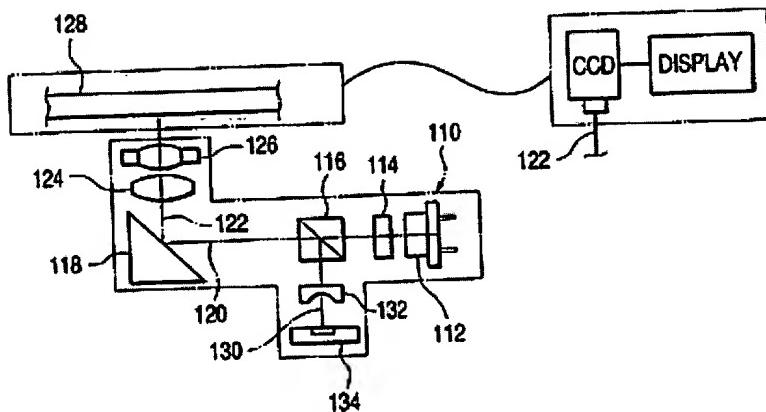


FIG. 12



(e) reflected light detecting means (134, see FIGS. 9 and 12) for detecting reflected light of each spot (M to J) passed through the spot forming means (126).

The Official Action asserts that Fujisawa teaches a light reflection optical element (beam splitter 82; although the Official Action refers to "Fig. 14, unit 14," reference 14 does not appear in Figure 14, and it appears the Official Action intended to refer to beam splitter 82), a spot forming means (object lens 51), recording medium (optical disc 1), support means (base member 79), fixing means (inherency), and reflected light detecting means (photodetectors 98, 99). However, Fujisawa does not teach or suggest that beam splitter 82 is attached rotatably around each of the first and second axial lines. Also, the object lens 51 of Fujisawa only creates a single spot, not a plurality of spatially separated spots for each track of a recording medium. Further, the base member 79 of Fujisawa does not rotatably support the beam splitter 82, nor does it

movably support the beam splitter 82 on a chassis along a direction of a first and/or a second axial line. Still further, the allegedly inherent fixing means of Fujisawa does not teach or suggest fixing the beam splitter 82 whose position (rotational or otherwise) has been adjusted so that a focus state of a plurality of spots are substantially equal. Finally, the photodetectors 98, 99 of Fujisawa do not detect reflected light of each spot passing through a spot forming means (object lens 51), because only the first photodetector 98 of Fujisawa appears to receive any reflected light that has passed through object lens 51. Photodetector 99 does not receive any reflected light that has passed through object lens 51.

Crane and Noda do not cure the deficiencies in Fujisawa. Fujisawa, Crane and Noda would not teach or suggest attaching beam splitter 82 rotatably around each of the first and second axial lines; adapting object lens 51 of Fujisawa to create a plurality of spatially separated spots for each track of a recording medium; modifying the base member 79 of Fujisawa to rotatably support the beam splitter 82; modifying the base member 79 to movably support the beam splitter 82 on a chassis along a direction of a first and/or a second axial line; fixing the beam splitter 82 whose position (rotational or otherwise) has been adjusted so that a focus state of a plurality of spots are substantially equal; or adapting photodetector 99 so that it receives reflected light that has passed through object lens 51.

Since Fujisawa, Crane and Noda do not teach or suggest all the claim limitations, a *prima facie* case of obviousness cannot be maintained.

Furthermore, there is no suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify Fujisawa, Crane and Noda or to combine reference teachings to achieve the claimed invention.

The Official Action concedes that Fujisawa and Crane do not disclose "more than two photodetectors to the extent claimed" (page 4, Paper No. 20050530). In addition, the Applicants respectfully submit that Fujisawa and Crane do not teach or suggest all

the features noted in detail above. The Official Action relies on Noda to allegedly teach a "plurality of adjacent photodetectors lining up in a single file" (page 4, *Id.*) and asserts that it would have been obvious to combine Fujisawa, Crane and Noda.

Although Noda may teach a "plurality of series of light spots" and a "plurality of series of photodetectors," Noda does not recognize the problem that a focus state of each light spot is unbalanced and thus cannot teach or suggest the solution to such problem as in the present invention. As such, there is no motivation to modify Fujisawa, Crane and Noda or to combine reference teachings to achieve all the features of the present invention.

In the present application, it is respectfully submitted that the prior art of record, either alone or in combination, does not expressly or impliedly suggest the claimed invention and the Official Action has not presented a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references.

For the reasons stated above, the Official Action has not formed a proper *prima facie* case of obviousness. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 103(a) are in order and respectfully requested.

Should the Examiner believe that anything further would be desirable to place this application in better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

  
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